

A P P E N D I X I:

CLAIM AMENDMENTS:

Amend Claims 1 to 10 and 16 to 18 as indicated in the following listing of the claims:

1. (currently amended) A ~~process for producing~~ method of improving the apparent density and stability of a dry powders powder of one or more carotenoids ~~by~~ which comprises
 - a) dispersing the one or more carotenoids in an aqueous molecular or colloidal solution of a mixture comprising effective amounts of lactose and a protective colloid, and optionally containing additional solvents, and
 - b) converting the dispersion formed in step a) into a dry powder by removing the water and the additional solvents and drying, optionally in the presence of a coating material,wherein at least one soybean protein is used as protective colloid in process step a).
2. (currently amended) A ~~process as claimed in~~ The method of claim 1, wherein the ~~dispersion~~ dispersing step a) comprises ~~the preparation of preparing~~ a suspension of the one or more carotenoids in ~~an~~ the aqueous molecular or colloidal solution of ~~a~~ the mixture of lactose and the at least one soybean protein.
3. (currently amended) A ~~process as claimed in~~ The method of claim 2, wherein the suspension prepared in ~~process~~ step a) is ground before ~~conversion~~ being converted into a the dry powder in step b).
4. (currently amended) A ~~process as claimed in~~ The method of claim 1, wherein the ~~dispersion in stage~~ dispersing step a) comprises the following steps:
 - a₁) dissolving the one or more carotenoids in a water-miscible organic solvent or in a mixture of water and a water-miscible organic solvent or
 - a₂) dissolving the one or more carotenoids in a water-immiscible organic solvent and
 - a₃) mixing the solution obtained as in a₁) or a₂) with ~~an~~ the aqueous molecular or colloidal solution of ~~a~~ the mixture of lactose and the at least one soybean protein, ~~resulting in the~~

to obtain a hydrophobic phase of the carotenoid as nanodisperse phase in nanodispersed form.

5. (currently amended) ~~A process as claimed in~~ The method of claim 1, wherein at least one partially degraded soybean protein with a degree of hydrolysis of from 0.1 to 20% is used as protective colloid.
6. (currently amended) ~~A process as claimed in~~ The method of claim 1, wherein the carotenoids used are oxygen-containing carotenoids.
7. (currently amended) ~~A process as claimed in~~ The method of claim 6, wherein the oxygen-containing carotenoids are compounds selected from the group consisting of astaxanthin, canthaxanthin, lutein, zeaxanthin, citranaxanthin and ethyl β -apo-8'-carotenoate.
8. (currently amended) ~~A process as claimed in~~ The method of claim 7, wherein
 - a) astaxanthin and/or canthaxanthin is dissolved in a water-miscible organic solvent or a mixture of water and a water-miscible organic solvent at temperatures above 30°C,
 - b) the resulting solution is mixed with an aqueous molecular or colloidal solution of a mixture of lactose and a partially degraded soybean protein with a degree of hydrolysis of from 0.1 to 20%, and
 - c) the dispersion which has formed is converted into a dry powder.
9. (currently amended) ~~A process as claimed in~~ The method of claim 8, wherein astaxanthin is used as carotenoid.
10. (currently amended) A carotenoid-containing dry powder ~~obtainable~~ having an improved apparent density and stability which is obtained by a process as defined in the method of claim 1.
11. (previously presented) A dry powder as claimed in claim 10 with a carotenoid content of from 0.1 to 30% by weight.
12. (previously presented) A dry powder as claimed in claim 10, comprising oxygen-containing carotenoids selected from the group consisting of astaxanthin, canthaxanthin, lutein, zeaxanthin, citranaxanthin and ethyl β -apo-8'-carotenoate.
13. (previously presented) A dry powder as claimed in claim 12, comprising 5 to 20% by weight of astaxanthin.

14. (previously presented) A dry powder as claimed in claim 12, comprising 5 to 20% by weight of canthaxanthin.
15. (previously presented) A human food, a pharmaceutical or an animal feed comprising the carotenoid-containing dry powder defined in claim 10 as an additive.
16. (currently amended) A carotenoid-containing dry powder having an improved apparent density and stability which is obtained by a process comprising
- a) dispersing one or more carotenoids in an aqueous molecular or colloidal solution of a mixture comprising effective amounts of lactose and a protective colloid, and optionally containing additional solvents, and
 - b) converting the dispersion formed in step a) into a dry powder by removing the water and the additional solvents and drying, optionally in the presence of a coating material,
- wherein at least one partially degraded soybean protein having a degree of hydrolysis of from 0.1 to 20% is used as the protective colloid in process step a).
17. (currently amended) The dry powder defined in claim 16 wherein stage a) of the process comprises
- a₁) dissolving the one or more carotenoids in a water-miscible organic solvent or in a mixture of water and a water-miscible organic solvent, or
 - a₂) dissolving the one or more carotenoids in a water-immiscible organic solvent, and
 - a₃) mixing the solution obtained in a₁) or in a₂) with ~~an~~ the aqueous molecular or colloidal solution of ~~a~~ the mixture of lactose and the at least one soybean protein, ~~resulting in the~~ to obtain a hydrophobic phase of the carotenoid ~~as nanodisperse phase~~ in nanodispersed form.
18. (currently amended) The dry powder defined in claim 17 wherein stage a) of the process comprises
- a₁) dissolving the one or more carotenoids in a water-miscible organic solvent or in a mixture of water and a water-miscible organic solvent at a temperature above 30°C, and
 - a₃) mixing the solution obtained in a₁) with ~~an~~ the aqueous molecular or colloidal solution of ~~a~~ the mixture of lactose and the at least one soybean protein, ~~resulting in the~~ to obtain a

hydrophobic phase of the carotenoid ~~as nanodisperse phase~~ in nanodispersed form.

19. (*previously presented*) The dry powder defined in claim 18 wherein the solution obtained in a₁) is mixed with the solution of the mixture of lactose and the soybean protein at a mixing temperature of from about 35°C to 80°C.
20. (*previously presented*) A human food, a pharmaceutical or an animal feed comprising the dry powder defined in claim 16.

A P P E N D I X III:

DRAWING(S) AMENDMENTS:

Amend Figure(s) ... as set forth below:

A r/Replacement Sheet/s setting forth the amended figure/s is/are attached.